

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANTS: Kevin M. Christiansen
SERIAL NO.: 10/667,241
FILING DATE: September 18, 2003
TITLE: System for Data Transfer Through an I/O Device Using A Memory
Access Controller Which Receives and Stores Indication of a Data
Status Signal
EXAMINER: Eron J. Sorrell
GROUP ART UNIT: 2182
ATTY. DKT. NO. 18602-08301

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.8(a)(i)(C) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: _____

By: _____

Brian M. Hoffman, Reg. No. 39,713

MAIL STOP APPEAL BRIEF - PATENTS
COMMISSIONER FOR PATENTS
P. O. BOX 1450
ALEXANDRIA, VA 22313-1450

REPLY BRIEF

This Reply Brief is filed in accordance with 37 CFR § 41.41 in response to the Examiner's Answer, which was mailed on July 9, 2008.

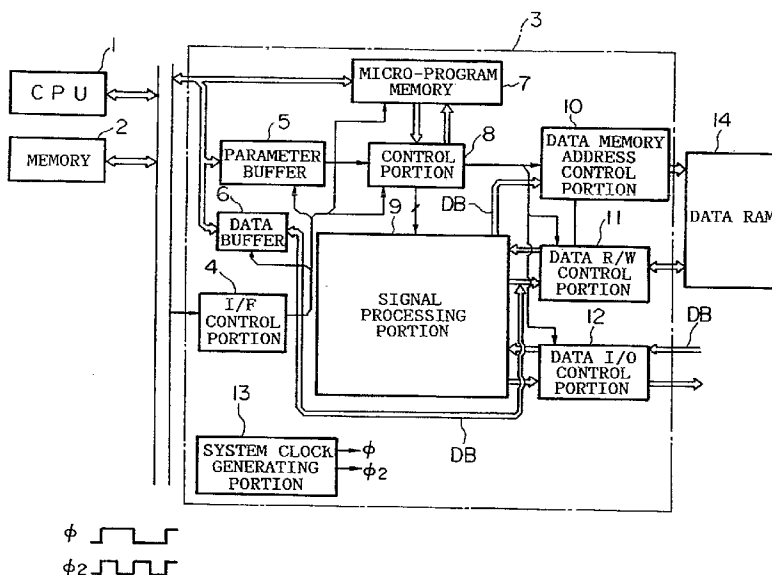
Matsumoto Does Not Teach Communications with a System External to the Computer

Representative claim 21 recites a memory access controller comprising a register storing a data status signal generated after an input/output (I/O) device “transfers a data unit to a system external to the computer.” The Examiner asserts that this feature it is taught by Matsumoto, U.S. Patent No. 5,614,685.

Matsumoto discloses a musical tone signal processing device having a digital signal processor (DSP). At col. 3, lines 64-67, Matsumoto states that a “data I/O control portion 12 performs a data input/output control on data to be transmitted between the DSP 3 and **the external device or system**” (emphasis added). Matsumoto does not define “the external device or system” but does describe an “external data memory” which is separate from the DSP but included within the same computer. Matsumoto, col. 3, lines 21-22. Thus, Appellant argues that Matsumoto uses “external” to reference an off-chip device that is within the same computer as the DSP rather than “a system external to the computer,” as claimed.

The Examiner agrees that Matsumoto does not specifically define the “external device or system” but states that one of ordinary skill in the art would use the plain meaning of the phrase to interpret it to mean a system external to the computer. The Examiner primarily relies on figure 1 of Matsumoto to support this interpretation. Figure 1 shows an external data memory (data RAM 14) having a dedicated data R/W control portion 11. Therefore, asserts the Examiner, the data I/O control portion 12 must be communicating with something other than the external data memory. And, therefore, it is reasonable for one of ordinary skill in the art to interpret the “external device or system” referenced in Matsumoto’s specification to be a system external to the computer.

However, figure 1 of Matsumoto does not support the Examiner's alleged "plain meaning" interpretation of "external device or system." Figure 1 of Matsumoto shows a DSP 3 within a single computer system:



The DSP 3 is connected to various external devices, including the CPU 1, memory 2, and data RAM 14. All of these devices are within the same computer as the DSP, and there is no reason to conclude that the data I/O control portion 12 is communicating with something other than a device within the same computer. Thus, there is no evidence in the figure that the data I/O control portion 12 is communicating with a "a system external to the computer" as alleged by the Examiner.

In fact, the other references cited by the Examiner during prosecution of this application directly contradict the Examiner's interpretation. Kawai, the reference that the Examiner combines with Matsumoto to support the § 103 rejection, plainly uses the phrase "external device" to reference a device that is external to the DSP yet internal to the computer:

In direct memory accessing mode, data transfer between a processor and an **external device (a memory or processor)** is effected directly under control of a direct memory access controller which is an on-chip or off-chip device.

U.S. Patent No. 5,583,010, col. 1, lines 34-38 (emphasis added). Likewise, Morimoto, the reference that the Examiner previously combined with Kawai, also uses the phrase “external device” in a manner that contradicts the Examiner:

Conventionally, DSP's used in image processors, **tone generators**, etc., carry out filtering and other processing of various kinds, by once saving externally-supplied coefficient data and signal data to an internal data random access memory (RAM)...followed by delivering the processed data to an **external device**. Due to the limited capacity of the internal data RAM of the DSP, additional coefficient data and signal data have to be supplied for processing from **external memories** or the like by the DMA transfer during time intervals between processings. Results of the arithmetic processing are also transferred to **external memories or the like** by the DMA transfer during time intervals between processings.

U.S. Patent No. 5,765,025, col. 1, lines 21-36 (emphasis added). Tellingly, these quotes from Kawai and Morimoto are both from the patents' Background sections and are describing conventional uses of the phrase “external device.” Morimoto, further, specifically uses the phrase in the context of a tone generator like that described in Matsumoto. The references thus demonstrate that the plain meaning of “external device” is not the meaning advocated by the Examiner.

In sum, the neither Matsumoto's figure nor the other references support the Examiner's interpretation of “external device or system.” In fact, it appears that the Examiner has used Matsumoto's ambiguity surrounding this phrase to advocate an interpretation that contradicts its usage in other references relied upon by the Examiner during prosecution of this application. Accordingly, Matsumoto uses the phrase “external device or system” to refer to an off-chip device that is within the same computer as the DSP rather than “a system external to the computer” as claimed.

Respectfully submitted,

Kevin M. Christiansen

Dated: September 9, 2008

By: /Brian Hoffman/
Brian M. Hoffman, Reg. No. 39,713
Attorney for Appellants
Fenwick & West LLP
Silicon Valley Center
801 California Street
Mountain View, CA 94041
Tel. (415) 875-2484
Fax (650) 938-5200